

California Nat'l Association.

GEO. W. BRODBECK.

Bees and Pear-Blight.

J. E. JOHNSON.

AMERICAN BEE JOURNAL

MASSACHUSETTS
AGRICULTURAL
COLLEGE

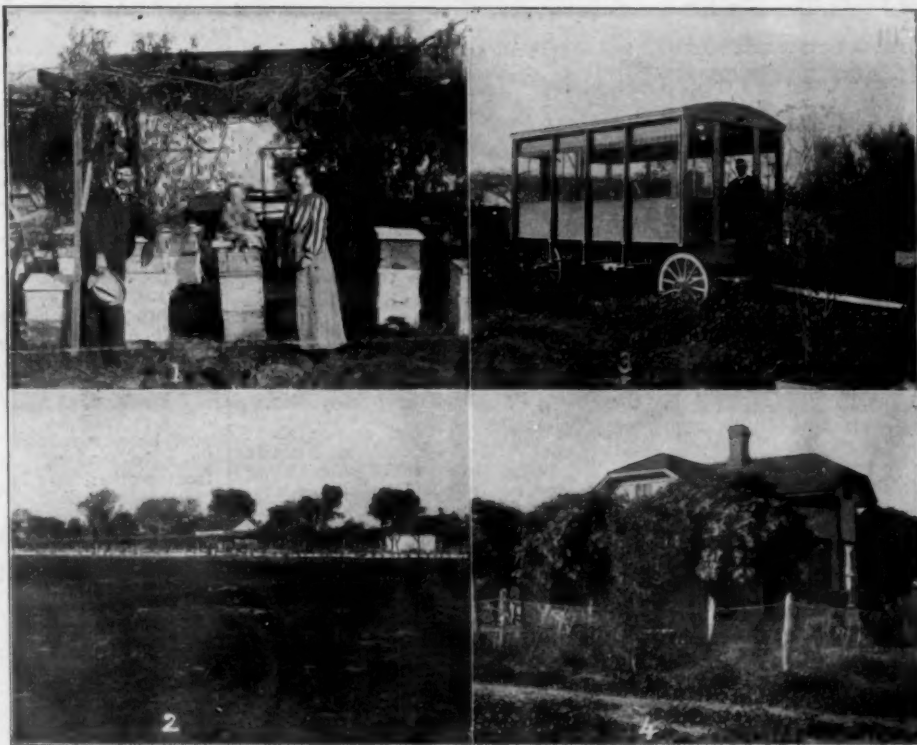
43d Year.

CHICAGO, ILL., FEB. 26, 1903.

No. 9.

WEEKLY

One of Arizona's Bee-Keeping Sons.
(See page 133.)



1. Mr. and Mrs. J. P. Ivy and Daughter, of Maricopa Co., Ariz.
2. Home Apiary of Mr. Ivy.
3. Movable Extracting-House—model of simplicity and convenience.
4. The Ivy Home.



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EDITOR,
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DEPT. EDITORS,
 DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is \$1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

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FROM MANY FIELDS

Shaken or Forced Swarms.

I will try and answer the following questions through the AMERICAN BEE JOURNAL:

"1. I read your article on page 55. Why not shake on wide starters?"

"2. They did not punctuate as you intended. I think you wanted to say that 'after the five frames were filled then insert drawn combs or frames filled with foundation.' Did you not?"

"3. I see Mr. Miller, at the Ontario convention, said: 'Do not leave extracted honey open.' Do you agree to this?"

"4. Why need we turn hives upside down in transferring?"

"5. Our alfalfa blooms about every five or six weeks during summer. Now, why wouldn't you shake at the beginning of every flow, as I want to double my colonies and get the alfalfa honey in supers and let them fill up brood-chamber from heartsease for winter?—F. KINGSLEY, of Nebraska."

ANSWERS.—1. Because if the bees get ahead of the queen in building comb they will build drone-comb. By using half-inch starters the queen, if a prolific one, will keep up with the bees with egg-laying, and consequently there will be less drone-comb built.

2. Yes; I intended to say "and after the five frames are filled the dummies should be removed and space filled with full sheets of foundation or drawn combs."

3. Yes, I agree with you. I never extract until all honey is sealed and well ripened; then I put in a tank holding 3,600 pounds to settle, and seal, as I think it retains its flavor better.

4. In transferring from box-hive I turn

the hive upside down, as the honey is at the top, and as the lower end is generally open it is less trouble to turn the hive over; and, besides, if there is any honey in the hive, in tearing off the cover the honey would begin to run, and bees can't be driven over sticky combs. Another reason is, if bees are inclined to rob you are liable to start them.

5. I don't think your bees would build up sufficiently to shake every five or six weeks. If you did shake that often you would more than double your colonies. If your bees are strong enough to shake at the beginning of the first flow from alfalfa you can do so; but if I wanted to increase my colonies I would not make the second drive, but would leave enough bees to take care of the brood and remove the old colony to its permanent place and give a queen or ripe cell, and it will be ready for the fall flow, and depend on the swarm for your surplus from alfalfa. *Never shake until your bees are strong and there is honey coming in.* J. T. HAIRSTON.

Cherokee Nation, Ind. Ter.

Press for Forming Sections.

I enclose a sketch of section-press that I invented and used for the last two seasons. It does the work fast and easy. A lever raised by a spring folds the section, place in press; pull down the lever and the section is pressed nicely together and is square.

The small pieces in the corners (xx) are pieces of a section-box; they are there so the section will be pressed a little more than square (they will spring back square).

On the side of the press have a board that covers the opening so the section will be placed in opening square and even.

I don't think any more explanation is necessary; if so, will be glad to answer any question you may ask.

I. C. BACHTEL.

Modoc Co., Cal.

[This section-press will no doubt make good work, as it is practically the same as one in use for a long time, although later presses have largely taken its place. Section-presses are furnished ready-made at such moderate prices that one could hardly afford to make one of these for his own use, especially as this can hardly be called an improvement.—Ed.]

Cleaning Partly-Filled Sections.

Allow me to say a word or two about cleaning partly filled sections, as I notice Miss Wilson has some trouble in having them cleaned out by the bees (page 41). I have no trouble and have now on hand some four or five hundred, which I use in the spring on such hives as I find in need. The Bevins method, in theory, may be all right but is not practical for several reasons:

1. If the colony is a little weak (and those are the ones that need feeding) it allows too much cold air to circulate through the body of the colony and chills them.

2. It does not separate them sufficiently but what they can get at it at any time. But if you will take a thin board, mortise a hole at one end $\frac{1}{2}$ by 3 or 4 inches, and place it on the hive, then a super on that, set the sections in promiscuously, and uncap and deface the honey enough to set it running, I am inclined to think you will have no further trouble in having your desires accomplished. The board should be thin, $\frac{1}{4}$ or $\frac{3}{8}$, placing the mortise in the front to avoid draught.

I had the same trouble mentioned with cloth, but since using the above method I succeed every time. Should there be a failure where the honey is capped, deface

it with a chisel or other implement you have in use. I use a one-inch firmer chisel, which I find to be the handiest tool for all-round purposes that I can find. A smoker, chisel, goose-wing and an old-style case-knife and you can have all the balance of the whole paraphernalia in the bee-kingdom. Try the goose-wing for a brush and see if it does not surpass any brush mentioned in the supply catalog. A. Y. BALDWIN.

DeKalb Co., Ill.

Worcester Co., Mass., Convention.

The annual meeting of the Worcester (Mass.) County Bee-Keepers' Association was held Saturday, Jan. 24, 1903. The following officers were elected:

President, Charles E. Prouty; first vice-president, Horace P. Jacobs; second vice-president, Norman B. Parsons; secretary and treasury, Charles R. Russell.

Plans were made for some very interesting meetings during the spring. Speakers from outside, papers from our own members (including ladies), a banquet, outings to surrounding apiaries during the summer; in fact, a whole season of enjoyment is before us.

At the meeting of Jan. 24 Mr. S. A. Burgess related a very pleasing incident. He has lived in one house all or nearly all of his life. More than fifty years ago a hive of bees was placed in a small attic room; as soon as the hive was full the bees made comb on the outside, and gradually spread out until the walls and ceiling are nearly covered, and for more than fifty years the bees have been allowed to use that room. The writer has never been there, but he hopes to go before long and will be able to give a complete description.

Another one of the older members, Mr. S. B. Parsons, is very enthusiastic on the subject of bee-stings as a cure for rheumatism. He has no relish for the story told by Dr. Mackie of a man who was so firm in the clutches of that disease he could not walk; he was taken to an apiary and wheeled in a barrow to the side of an unusually cross colony. The hive was kicked over and the sick man jumped up and ran, cured of his trouble!

Later I will tell more of our association, number of members and other matters pertaining to bee-keeping in this vicinity. C. R. RUSSELL.

Worcester Co., Mass.

Observations on Queen-Rearing.

I see by Mr. Alley's last article he disdains to refer to my \$25 proposition, and well he may, as he would surely lose if he were to send me five queens reared from worker-eggs in nuclei.

I am also able (after reading Mr. Alley's article) to pick out conclusive evidence enough in that article to condemn his entire method of rearing queens. In that article he speaks of a very populous nucleus that after having their queen taken away refused to accept a virgin queen, and that this same small nucleus reared a batch of queens from their own brood, among which was one that was worth \$100, and that the others were not good enough for breeders.

Now, I want to ask Mr. Alley: Did you ever think that that small colony was so crowded that the queen you took away had deposited an egg in a cell-cup, and that the colony would have swarmed in a few days anyway, and that \$100 queen was a natural queen, and all the rest were only queens from worker-cells?

Another thing I want to state for the benefit of the uninitiated, and that is, look out for any queen breeder who has a \$100 queen, as his system of rearing queens must be seriously wrong, or he would have more good queens, and as a

(Continued on page 139.)

AMERICAN BEE JOURNAL

ESTABLISHED IN 1861 THE OLDEST BEE-PAPER IN AMERICA

43rd YEAR.

CHICAGO, ILL., FEB. 26, 1903.

No. 9.

Editorial.

Honey North and South.—There is always a possibility that two persons looking from different standpoints will see the same thing in different lights. The following letter illustrates this:

EDITOR AMERICAN BEE JOURNAL.—
Commenting upon Editor Hill's paragraph as quoted on page 51, I wish to say that, in the minds of some, there is some doubt that the South puts upon the market a larger percent of low-grade honey than any other section of the country.

Again, "The unprogressiveness of many sections of the South is well known." (Is this unprogressiveness confined to the South?) "The product of the bee-keeping element in such localities is necessarily inferior." Why so? Does man's laziness or ignorance have any effect upon the bee? Is it necessary that the bee-keeper be of the general type? Escambia Co., Fla. C. C. PARSONS.

Editor Hill, himself a Southerner, and, indeed, a fellow-Floridan with Mr. Parsons, is pleading for justice to the South, and, no doubt, both men are of the progressive type, and if all men of the South had been just like them, it is likely that there never would have been any occasion for Mr. Hill to make his plea.

There is unprogressiveness in the North as well as the South, but whatever may be said as to the proportion of each, the fact remains that when honey has been put on the market as Southern honey, it has been quoted at a lower rate because it was Southern honey. No doubt, the nectar collected by the bee of the most up-to-date bee-keeper is not a whit better than that collected by a bee belonging to the ignorant and shiftless, but when that product is ready for the market there may be a distinct difference in appearance, and also in real value. One sample may be thoroughly ripened and luscious, while the other is thin, watery, and unpleasant to the taste. There may also be a marked difference in two samples of comb honey, both gathered from the same honey-plant.

Something has given ground for the belief that Southern honey, in general, is more or less inferior. It is unfair to Mr. Parsons to say that his honey should bring any less in the market than another sample exactly like it produced farther north. This injustice should not continue. If he can make it appear that it was all a mistake to suppose that any considerable quantity of honey produced in the South was inferior, he may in time change the significance of the term "Southern honey." But that would take a good deal of

time, and possibly no amount of time would make the effort successful. Possibly he will find it a shorter task to take the ground that justice requires that his honey should stand on its own merits for what it is, without having any classification that shall arouse prejudice against it.

Duty on Honey to Canada.—In the report of the Ontario convention, on page 39, reference is made to the fact that Cuban honey is shipped to Toronto. It would, perhaps, more clearly represent the market if it had been said that there is a specific duty of 3 cents per pound on all honey going into Canada. Mr. Holtermann has called attention to the fact that he mentioned this duty particularly to the convention in this connection. So writes Mr. Morley Pettit, who reported the Ontario convention for the American Bee Journal.

The Texas Experiment Station Report has been received. It is a neatly printed pamphlet of 53 pages, six of which are occupied by the report proper, and 39 by an elementary treatise on bee-keeping for farmers and others desiring to keep a few bees. Prof. Fred W. Mally is professor of Entomology at the Agricultural and Mechanical College, assisted by Wilmon Newell, the latter having immediate charge of the apiary, and apparently the laboring oar in the preparation of the Report.

The Experimental Apiary was established in 1902, with seven colonies of bees, which were increased during the season to 21. The sum of \$500 was voted by the Legislature for use in the year, and was invested in bees, queens, hives, books, honey-house, etc.

The effort has been to breed to the highest standard of excellence, keeping careful record of all colonies, and selecting the best as mothers of queens and drones.

It is proposed during the coming year to make a comparative study of the different strains or races of bees, and especially to determine approximately the comparative length of life of the different races. This is believed to have an important bearing upon the harvest in seasons of special drouth.

The study of honey-plants will also be continued. It seems a little curious to note that while American varieties of buckwheat are set down as partial or total failures, Japanese buckwheat gave the best results of all plants tested. The report says:

With medium or even poor soil, and a very small amount of moisture, this plant can be depended upon to begin blooming 30 days after planting, and will continue to bloom for 30 days, at the end of which time the seed is ready to gather. It will be seen that it is a

very easy matter to regulate the time of sowing, so that a honey-flow will be had from this plant at the beginning of a dearth of natural forage for the bees.

Japanese buckwheat thrives best when drilled in rows about three feet apart, and cultivated during growth. The seed brings from \$1.00 to 1.50 per bushel. In case seed is not desired the buckwheat can be cut and cured as in other hay, and is found to make valuable feed for farm animals. If grown more extensively there is no doubt that such hay would bring a good price in the open markets.

The cowpea, especially the speckled variety, is commended.

In the treatise on bee-keeping, in a list of eight reliable text-books adapted to the beginner, Maeterlinck's "Life of the Bee" stands next to the highest, and Doolittle's "Queen-Rearing" last. Otherwise the information is reliable, and calculated to be of good service to the class for whom it is intended.

Age of Brood-Combs.—In this country it has long been held that so long as worker-comb is in good condition there is no need to renew it in the brood-nest, and in Europe this view has also gained ground. In England, however, a different view is held. A late number of the British Bee Journal advises that brood-combs be gradually renewed, two or three each year, but not more than three in a single season. That means that in somewhere from three to six years, age alone incapacitates a comb for further service. The question is whether it is the climate of England, or what it is, that throws a comb out of service in so few years when there have been so many proofs that elsewhere a comb 20 years old is as good as new—in some respects better.

Honey in Bait-Sections, in the practice of most bee-keepers, is never allowed, the honey being scrupulously cleaned out of the combs by the bees in the fall before it has time to granulate. Some, however, have no fear as to ill results from having a little honey left over in the sections to be used as baits. Bearing upon the subject is the following in the British Bee Journal, from H. S. Shorthouse:

The occasional crystallization of one jar of honey which granulates, while the others remain bright and liquid, is accounted for by the fact that the bottle either contains a small portion of grit, or is slightly rough or irregular in some particular part of the inside, which lends a starting point of crystallization to the sugars which are contained in the honey in what we will term a state of supersaturation.

An experiment (on crystallization), using sulphate of soda for the purpose, most beautifully illustrates this theory. If we take a quantity of sulphate of soda, dissolve it in a minimum quantity of hot water, and whilst warm tie over the neck of the vessel in

which it is contained a parchment paper and allow it too cool, we can at any moment cause the solution to crystallize by the puncturing of the paper with a needle, or by keeping the bottle air-tight we can retain it in solution form.

Again, we can make solutions of chemicals, and can manipulate them without any signs of separation, but the introduction of a further small crystal of the same, or some other substance, will spontaneously cause the crystallization of the whole, and I feel assured that the granulation of honey can be accelerated by the addition of a very small crystal of the ordinary cane-sugar.

Weekly Budget.

PROF. A. J. COOK, of Los Angeles Co., Calif., writing us Feb. 16, reported "prospects for a honey crop in California good. Splendid rains."

MR. THOMAS G. NEWMAN, of San Francisco, Calif., has been very ill. So it is reported in his Philosophical Journal of Feb. 14. It says he was stricken Feb. 5, which was the 49th anniversary of his wedding day, and adds:

He has been fighting a battle-royal for more than three weeks with la grippe in one of its worst forms. For eleven nights unable to rest or sleep, and yet each day taking up the work in all its trying, taxing details which is necessary to the editing and publishing of the paper and general work of the book concern connected with it.

Their friends, who have observed the vast amount of work which was being done by both Mr. and Mrs. Newman, and have seen how weary they were growing, are not so much surprised that at last one of them has fallen at his task, and with the harness on.

On Thursday, in going to the post-office, Mr. Newman suddenly lost consciousness and fell to the pavement, receiving what proved to be but a slight scalp wound. He was carried to a drug-store near by, and fortunately regained consciousness sufficient to give information regarding himself. He is now in a critical condition, and complete rest is the surest and almost the only means of assuring his restoration even to where he may take up the work he has been compelled to drop.

Mr. Newman's host of bee-keeping friends will read the foregoing with much regret; and all will unite in the hope that he may be spared, and that his recovery may be entire as well as speedy.

THE CALIFORNIA ASSOCIATION.—We have received the following from Pres. Geo. W. Brodbeck, of the California National Honey-Producers' Association:

MR. EDITOR:—I herewith send you a copy of our by-laws defining the purposes of our organization. You will notice that it is a corporation, nevertheless it is a co-operative proposition, controlled entirely by bee-keepers. The requirements are such that it need exclude no one.

Yes, it is evident we have a big contract on hand, but judging by the display of interest up to date by the receipt of communications asking for information from all sections of the State, the subscriptions for stock that are coming in daily from both large and small producers, the requests that are coming in from all localities for some one to come and organize local associations, all go to prove that never before in the history of California bee-keeping has this fraternity displayed such interest in helping along a project as they are doing with this one. We purpose in getting

a live, wide-awake manager, that will keep in touch with every stockholder, be he large or small, making no distinction, working only for the good of the whole.

GEO. W. BRODBECK.

The By-Laws referred to by Pres. Brodbeck, are these:

BY-LAWS OF THE CALIFORNIA NATIONAL HONEY-PRODUCERS' ASSOCIATION.

The name of the corporation shall be the California National Honey-Producers' Association.

ARTICLE I.

Corporate Powers.—The corporate powers of this corporation shall be vested in a board of five directors, who shall be stockholders, holding three hundred or more shares of stock in their own names on the books of the company, and three shall constitute a quorum for the transaction of business.

ARTICLE II.

Election of Directors.—The directors shall be elected by ballot, at the annual meeting of the stockholders, to serve one year and until their successors are elected. Their term of office shall begin immediately after election.

ARTICLE III.

Vacancies.—Vacancies in the board of directors shall be filled by the other directors in office; and such person shall hold office until the first meeting of the stockholders thereafter.

ARTICLE IV.

Power of Directors.—The directors shall have power:

1st. To call special meetings of the stockholders when they deem it necessary. And they shall call a meeting at any time upon the written request of the stockholders holding one-third of all the subscribed stock.

2d. To appoint and remove at pleasure all officers, agents and employees of the corporation, fix their compensation, and require of them security for faithful service, when it shall be deemed advisable.

3d. To conduct, manage and control the affairs and business of the corporation, and to make rules and regulations, not inconsistent with the laws of the State of California, or the by-laws of the corporation.

4th. To incur indebtedness. The terms and amount shall be entered on the minutes of the board, and the note or obligation given for the same, signed officially by the president and secretary, shall be binding on the corporation.

ARTICLE V.

Duties of Directors.—To cause to be kept a complete record of all their minutes and acts, and of the proceedings of the stockholders, and present a statement at the regular annual meetings of the stockholders, showing in detail the assets and liabilities of the corporation, and generally the condition of its affairs.

2d. To declare dividends out of the surplus profits, when such profits shall, in the opinion of the directors, warrant the same.

3d. To supervise all officers and agents and see that their duties are properly performed. To cause to be issued to the stockholders, in proportion to their several interests, certificates of stock.

ARTICLE VI.

Officers.—The officers shall be president, vice-president, secretary and treasurer, which officers shall be elected by the board of directors.

ARTICLE VII.

President.—The directors at their first meeting shall elect one of their number as president.

1st. The president, or in his absence the vice-president, shall preside over all meetings of stockholders and directors and shall have the casting vote.

2d. He shall sign all certificates of stock

and all other official documents and shall draw checks on the treasurer, and shall perform such other duties as may be necessary for the good of the corporation a consistent with his office.

ARTICLE VIII.

Secretary.—The board of directors shall elect a secretary.

1st. It shall be the duty of the secretary to keep a record of the proceedings of the board of directors and of the stockholders.

2d. He shall countersign all checks drawn upon the treasurer, and discharge such other duties as pertain to his office and are prescribed by the board of directors.

3d. The secretary shall serve all notices required either by law or the by-laws of the association.

ARTICLE IX.

Treasurer.—The treasurer shall receive and keep all the funds of the association in a bank and pay them out only on the check of the president, countersigned by the secretary.

2d. At each annual meeting of the stockholders he shall submit, for their information, a complete statement of his accounts for the past year. He shall discharge such other duties pertaining to his office as shall be prescribed by the directors.

ARTICLE X.

Superintendent.—A general superintendent shall be appointed by the directors and removable at their pleasure. It shall be his duty:

1st. To take charge of all property belonging to the company and to control and direct all business and labor, such as grading, sealing, storing and shipping honey, and any other duties required of him by the directors.

ARTICLE XI.

Compensation of Officers.—The officers shall receive such compensations as the directors shall from time to time determine upon.

ARTICLE XII.

Certificates of Stock.—Certificates of stock shall be of such form and device as the directors may direct; and each certificate shall be signed by the president and secretary, and express on its face its number, date of issuance, the number of shares for which, and the person to whom it is issued.

The certificate book shall contain a margin, on which shall be entered the number, date, number of shares, and name of the person expressed in the corresponding certificate.

ARTICLE XIII.

Transfer of Stock.—Shares of the association may be transferred at any time upon the sale of the bees which they represent, by the holders thereof, by endorsement on the certificate of stock. But no transfer shall be valid until the surrender of the certificate and the acknowledgment of such transfer on the books of the association.

2d. The receiver of the new certificate shall be required to sign the by-laws of the association. No transfer shall be valid if the holders are indebted to the association on any account whatever.

3d. No surrendered certificate shall be canceled by the secretary before a new one is issued in lieu thereof; and the secretary shall preserve the certificate so canceled as a voucher. If, however, a certificate shall be lost or destroyed, the directors may order a new certificate issued upon such guarantees by the parties claiming the same as they may deem satisfactory.

ARTICLE XIV.

Meetings.—The regular annual meeting of the stockholders shall be held on the first Wednesday in January of each year at 10 o'clock, in Los Angeles, at such place as the directors may provide, and each stockholder shall be notified by letter by the secretary at least two weeks before the time of meeting; provided that when such day shall fall on a legal holiday, then

such meeting shall be held on the next business day at the same hour.

At such annual meeting directors shall be elected by ballot to serve for the ensuing year, and until their successors are elected. No meeting of the stockholders shall be competent to transact business unless a majority of stock is represented, except to adjourn until such time as may be deemed proper.

Special meetings of the stockholders may be called by the president whenever he may deem it expedient, and he shall call such special meeting when requested to do so by the holders of at least one-third of the subscribed stock of the association. Notice of special meetings shall be given in the same manner as provided for at regular meetings, or when the stockholders are all present and sign a written assent thereto on the record of such meeting.

The president and secretary of the association shall act as president and secretary of stockholders' meetings, unless the meeting shall decide otherwise.

Directors' Meetings.—Regular meetings of the directors shall be held immediately after the annual meeting of the stockholders, and also upon the first Monday in each month at 10 o'clock a. m., and notice of such monthly meeting is hereby dispensed with. A majority of the directors shall constitute a quorum for the transaction of business. In case of an equality of votes the president may have a second or deciding vote.

Special meetings may be called by the president by his sending a notice in writing to each director four days before the time of the meeting called. Said meeting may be dispensed with at the discretion of the board.

ARTICLE XV.

Elections.—At all corporate meetings each stockholder, either in person or by proxy, shall be entitled to as many votes as he owns shares of stock. Such proxy shall be in writing and filed with the secretary.

ARTICLE XVI.

Seal.—The association shall have a common seal consisting of a circle having on its circumference the words "California Honey-Producers' Association."

ARTICLE XVII.

Governing the Sale of Honey.—No stockholder shall sell his honey crop or any portion thereof for less than the prices set by the directors.

A commission shall be paid to the association to defray the expense of grading, sealing and other costs of marketing.

2d. Money shall be advanced on honey stored in the association warehouse by a stockholder upon his written request, and such honey shall be held as security until it is sold or the loan, with interest, paid in full. The association shall furnish money on such honey at the lowest rate of interest that it is able to secure. All honey upon which loans are made shall be insured, and all other honeys shall be insured upon arrival at the warehouse unless the superintendent shall be notified to the contrary by the owner.

3d. The directors shall not change the selling price oftener than once a month. Stockholders placing honey in the hands of the association may choose their own time for selling, and when a member places his honey for sale at the rate set for a certain month he shall receive his proportionate amount of all money received by the association on sales of honey belonging to individual members during said month, provided it shall be received and the superintendent notified that it is for sale not later than the tenth of the month. Honey put on sale later than the tenth of said month shall be placed in the next month's division.

If a member wishes to place his honey in the warehouse and hold it for a raise in price he shall be permitted to do so,

and only the actual expense of grading, storage, etc., charged.

A member who has honey in the warehouse on sale may withdraw said honey upon fifteen days' written notice to the superintendent. Honey not on sale is always at the owner's disposal.

Honey belonging to the association must be placed on sale in the same manner as that belonging to an individual.

ARTICLE XVIII.

Withdrawal of Members.—A member may withdraw from the association at the annual stockholders' meeting by turning over his certificate of stock to the association, and he shall receive one-half of the price paid the association for said stock, and his proportion of all surplus money in the treasury, but honey produced during the year of membership must remain until sold.

ARTICLE XIX.

Amount of Stock.—No person shall buy less than one share of stock for each stand of bees owned by him, and he shall be required to give a written statement declaring how many stands of bees he owns at the time of his subscription for stock, and at each annual meeting of the stockholders. In case of an increase in bees of more than fifteen per cent that is not represented by a share of stock to the stand of bees the owner shall buy more stock in proportion to the increase.

Where there is a decrease of fifteen or more per cent and the owner has bought his limit of one share to the stand he shall return stock to the association in proportion to his loss in bees, for which the association shall pay him at the same rate as provided in Article XVIII.

The board of directors may offer stock for sale to the membership, aside from the initiatory stock, as the necessity of the association demands, but not to exceed ten shares to one colony of bees.

ARTICLE XX.

Amendments.—The by-laws may be altered or amended at any meeting of the stockholders by a majority of stock represented at such meeting.

ARTICLE XXI.

Fines.—Any member who at any time violates these by-laws or the conditions stated by them shall, after being duly notified and heard in his own defense, pay such fine as may be imposed upon him by the directors, not to exceed \$200 for each offense.

Know All Men by These Presents:

That we, the undersigned, being the holders and owners of more than two-thirds of the subscribed stock of the California National Honey-Producers' Association, hereby assent to the foregoing by-laws and adopt the same as the by-laws of the said corporation. In witness whereof we have hereunto subscribed our names this 19th day of January, A. D. Nineteen Hundred and Three.

L. E. MERCER.
GEO. W. BRODBECK.
M. H. MENDLESON.
L. S. EMERSON.
GEO. L. EMERSON.

Know All Men by These Presents:

That we, the undersigned, directors and secretary of the corporation known as and called the California National Honey-Producers' Association, do hereby certify that the above and foregoing by-laws of said corporation were duly adopted as the by-laws of said corporation on the 19th day of January, A. D. Nineteen Hundred and Three, and that the same do now constitute the by-laws of said corporation.

L. E. MERCER,
GEO. W. BRODBECK,
M. H. MENDLESON,

L. S. EMERSON,
GEO. L. EMERSON,
Directors.

GEO. L. EMERSON,
Secretary of the Association.

All beedom will watch with deep interest the progress and work of the California bee-keepers. While they are not exactly leaders in the work of co-operative effort in the sale of honey, yet on account of the importance of their crop, and at this time the feeling after a better way on the part of honey-producers generally, whatever of success or failure may develop in the California organization will be specially noted. Surely, they have the heartiest wishes of all for the accomplishment of every worthy desire and object.

THE STEADY SUBSCRIBER is thus honored by the Grocers' Criterion:

"How dear to my heart is the steady subscriber, who pays in advance at the birth of the year; who lays down his money and does it quite gladly, and casts round the office a halo of cheer. He never says 'Stop it, I can not afford it,' nor 'I'm getting more papers than now I can read,' but always says, 'Send it, the family likes it; in fact, we all think it a real household need.' How welcome he is when he steps in the sanctum, how he makes our hearts throb, how he makes our hearts dance. We outwardly thank him, we inwardly bless him, the steady subscriber who pays in advance."

Just the same in the Bee Journal office.

MR. J. P. IVY is one of Arizona's successful bee-keeping sons. A friend of his sent us the following in connection with the pictures found on the first page:

For some years I have been quite deeply interested in bees as a pastime and recreation, but never was pleasure greater, and never was there a more delightful surprise, than the hospitality shown me by Mr. J. P. Ivy. I met him, introduced myself, and he invited me to spend a night at his home—a home of comfort and happiness. Had bee-keeping itself been no pleasure to me, this meeting and courtesy of beedom, so to speak, would amply have repaid me.

In my wanderings over the country (I live in Delaware), I have never seen so complete, simple, and practical a system of apiculture as that of Mr. Ivy. Its economy and neatness strike the observer. Among the foremost of the great bee-keepers of the West, Mr. Ivy has six large out-apiaries, and ships several car-loads of honey every season. In a business of this magnitude some mutual understanding and adjustment of freight-rates, etc., are all-important. He, side by side with other progressive men, has striven to make the honey-business a straight and settled business, with just profits and fair dealing, and to advance the science of bee-keeping as well as to make an honest, honorable living.

E. G. BRADFORD, JR.

DR. GALLUP, THE BARON, BANANA HONEY.—That is rubbing it into Dr. Gallup. If I were in his place I certainly should gallop off after getting a roast like that.

However, I should suggest to Baron M. Lieawful to change his name to "Baron von Munchausen."

I have no doubt that it will be necessary for Baron M. Lieawful to provide himself with collar and chain for his queen, as she certainly would be a dangerous insect if she ever ran amuck.

Tell us something of banana honey; that's all we get here. PORTO RICO.

If you get banana honey you likely know more about it than almost any one else who reads this journal. Suppose you tell us something about it.

Convention Proceedings.

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago,
Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 118.)

Mr. Moore—I move that we proceed to discuss the questions appearing in the President's address seriatim.
The motion was seconded and carried.

LAWS ON BEE-DISEASES.

Pres. York—If Mr. France were here he could start us off on that.

Mr. Wilcox—At the first convention I ever attended that subject was up as the most prominent subject for discussion. Dr. Miller was present, and he was the only champion there was on the affirmative side of the question. It had been referred to a committee and laid over a year. One of the committee was Prof. Cook, and the other was Prof. McLain, and they reported that legislation for bee-keepers was inexpedient, and not advisable. And that seemed to be the sense of that meeting or convention, Dr. Miller alone standing out in favor of his theory that legislation for bee-keepers is desirable, and I believe he has something to say yet. How many times I have thought of it, since foul brood laws and pure food laws became enacted, and since our Association was formed to protect each other as far as possible from dishonesty. It seems to me a good thing. I don't know about legislation, or how we can bring it about, but I would like to see and hear much on that subject.

Pres. York—We would like to hear from Dr. Miller if he hasn't forgotten what he said 25 years ago.

Dr. Miller—I confess I did forget. When Mr. Wilcox spoke first I thought he had gotten the men mixed, but I do recollect now. There is this about it: There are States all about us that have felt the need of this very thing; they have secured the legislation, and they are better for it. I very much doubt if you can find a man in the State of Wisconsin—a bee-keeper—who thinks it was a bad thing to have the law. Perhaps there are some. How is that, Mr. Wilcox?

Mr. Wilcox—I have never found one who is against it. We are in favor of pure food laws, foul brood laws, and any other good laws that can be enacted.

Dr. Miller—Regarding foul brood, I never saw a case of it. I was once where it was, and I was foolish not to look at it. I don't know, but I hope I may never see it in my place. One of the investigators across the Ocean has told us that the bacilli alvei, the germ of the foul brood, is nothing more nor less than one of the common microbes—*bacillus mesentericus vulgaris*—that is pretty nearly everywhere. Once at our house we had trouble with bread that would get soft and stringy.

Mr. Moore—Mold?

Dr. Miller—Not dry, though; and that's made by the same thing that makes the foul brood.

Pres. York—Then your wife didn't make that bread? [Laughter.]

Dr. Miller—(I wish the president would keep his audience in order, and not interrupt me.) The only point I wish to make in that is, that there is more danger than we think of in foul brood. I have always felt, so long as there was none of it near me, I was entirely safe. I don't feel as safe as I did. Now, I would feel much less safe if I knew of foul brood within two miles, within ten miles of me. I don't know what day there may be a case of foul brood ten miles around me. For that one case I want to be provided in advance. I have no foul brood in my apiary, but I want the law so that if something of that kind does come I will feel safer than I am to-day, and you are all in the same boat that I am. You may not feel anxious about it, but you are not safe as long as there is no law to keep somebody from bringing foul brood next to you, on the next farm. No inspector to come around and look at it. You are paying

for fire insurance, and some of you for life insurance, and you would think it was very bad if you let your policy lapse and have no fire insurance. Now, you need all the insurance you can get against foul brood. You need the laws, and right along with that comes closely connected this matter of Wisconsin. Any one of you can't do much about getting foul brood laws, but as an organization here together you can do something.

Pres. York—This is certainly very important, and if we are going to attempt to get a foul-brood law during the coming winter we must start soon. The State Legislature meets in January. I have suggested that this Association co-operate with the State Association. Mr. J. Q. Smith is the president, and Mr. Jas. A. Stone is the secretary. Mr. Stone lives near Springfield, and could have the matter in charge.

Mr. Moore—One thing that occurs to me. We don't exactly think that Illinois is a back number in laws. For the protection of women it stands, I think, in the front rank of all the States. If you will read some of the law books you will find that women are classed as idiots and insane persons, and in Illinois they are classed as the superior of man, and their property rights are accorded to the very highest degree, and there are many laws in Illinois that are up to the times. There is not a law on the statute books of Illinois about bee-keepers' interests. Not a single law. That alone shows you the great need of something being done. All around us, one State has a law on foul brood, another has a law against spraying of fruit-trees in blossom, but Illinois has no laws whatever except the general food law which has just been passed, the old food law which has been a dead letter. With this exception there is no law for the benefit of bee-keepers especially.

Pres. York—We would like to hear from Mr. Clarke on this. I know several times at my office he has spoken about doing something.

Mr. Clarke—I think it is a most important thing. Now there is absolutely no protection to a man who understands the business, because some party that may have bees with foul brood, if he is 10 or 20 miles away from him, still as a kindness to one of their friends he may ship in a foul-broody colony to a man whose bees haven't got it. If shipped within a mile or two, it is only a question of a short time until he will have it in his own apiary. Of course, where a man thoroughly understands it, and it is within a mile or two of him, he can practically get clear of it. If he lets it get developed thoroughly in one or two colonies, and does not know it is amongst them, directly a frost comes and cuts off the flowers, the bees are going to look around and do some robbing, and they are going to take the foul-broody colony. The odor is offensive. They have no more than a bottle of honey in the hives because bees won't lay in the cells filled up with foul brood, so when they go into winter quarters they will have very few bees to protect their honey, and the others will rob them out, and when you get robbing in 80 or 100 colonies it is going to spread in every colony. Though one colony taken into your apiary in the fall would not develop at once, but directly the queen begins to lay in the spring they are going to take them, as well as two or three, and distribute them in the three or five hundred hives, and that goes to develop foul brood so that the man who has 200 colonies, with foul brood within two miles, isn't safe. This man can at the present time ship them to some friend half a mile from you, and you have no recourse at all. You can't say, "Here, destroy that colony," for if he doesn't want to he can keep them and throw them open to your bees if he wants to. There is absolutely no protection to a man. Besides that, I think it is needed as a protection to the public. Now we know that the instinct of the bee is that when there is a super put on, or a box to remove the honey from the brood-chamber up, if opened down below where the honey can be started over the foul brood scale, they will move that honey up into the super and drop down. That honey is sold. Under these circumstances I think that the law is not only a protection for the bee-keepers, but the public as well.

Dr. Miller—How many are there here whose bees are now troubled with foul brood, have it either in their own apiaries or near by?

Pres. York—How many have it at the present time?

Six held up their hands.

Mr. Clarke—I may say this, that although you can get an idea of the number here practically up-to-date bee-keepers that will be at a convention, still how many bee-keepers are there that don't take any interest in these conventions? These are the men we want to get after. The men who come here want to keep up with the times. We have dis-

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eases amongst every live creature under the sun. These are the men that this law is aimed against. Not at the bee-keeper who is here. They come to the convention, they get all the information and are informed.

Dr. Miller—These five or six men that raised their hands are not the ones who need the foul-brood law. The rest of us are the ones that need that law and want to have it. If I had foul brood in my apiary to-day I wouldn't give much whether you had a law or not. I haven't got it, and don't want it, and want things in shape so that I can fight it off.

Mr. Wilcox—I don't want to say anything in favor of a foul-brood law particularly, but I do want to say something. We, in Wisconsin, have one. Our State Association made the start. It is satisfactory to us. We hardly see how we can improve it except that we want two or three hundred dollars a year more to pay our foul-brood inspector. With that exception we think we are satisfied. I think I can speak the sentiment of every bee-keeper in Wisconsin when I say that we almost demand of you that you proceed to get the foul-brood law enacted in Illinois, and attempt to suppress the disease in this State so that it may not be transported continually into ours. We are continually in danger in buying queens or honey from your State, and if you go before your Legislature with a committee and Bill drafted to suit you, you will have no difficulty in getting it enacted. We had no difficulty when they saw that we were in earnest, and knew what we wanted, and how we wanted it, and you can do the same. I believe you can, and I know that you will be fortunate if you get as good an inspector as we did; but you need two of them, for your State is large enough to need it, and you will be completely successful in getting the disease so under subjection that it will not be spread. You will cure every case almost as quickly as it shows in any locality, and you will be proud to think that you have done it.

Mr. Kluck—If the bee-keepers of Illinois can only get a foul-brood law by coming together here and at other places this winter, it will be the end of their troubles. It is the men that keep bees that expect to get a crop next year who think it is a whole lot like finding money. They are the ones that do the most harm. If they have foul brood they say, "Well, bee-keeping doesn't pay very well; I will let that go. If the bees live they will live, and if they don't they will die." If we had a foul-brood law we could send the inspector there; he would condemn the apiary, and the man would either have to clean it up or destroy it. The most danger that we have from foul brood is from this man who keeps bees in anything from a nail-keg up to a dry-goods box, and they are in such shape that you can't do anything with them but destroy them. They are like a man that has horses that have distemper. After his horses have it he doesn't care whose get it. If we can only get a foul-brood law, and go before the Legislature and see our representatives in our different districts and tell them, "Now, you be sure and vote for this foul-brood law," why, we would have accomplished a great deal for Illinois.

Mr. Thompson—I don't think, like Dr. Miller, that the five or six gentlemen here who have foul brood don't need the law. I haven't foul brood in my own apiary, but I discovered it about half a mile from me, and I think I am in need of a law as much as any man in Illinois. I have to watch very closely now so that it doesn't get in mine. I was fortunate in finding a man who was willing to destroy it, as far as I know. All foul brood that was discovered is now in ashes.

Mr. Wilcox—How can you prevent it getting in yours, if it is within half a mile of you?

Mr. Thompson—The State law will help.

Dr. Miller—I believe that this organization can do more than any other agency in the State towards securing a foul-brood law. I very much doubt whether any of you would dispute that. I believe that if the whole time of this convention from now until the final adjournment should be taken up in discussing this, and then action should be taken resulting in getting a foul-brood law, it would be time well spent. I am not advising that, but only to show the importance I think attaches to this subject.

(Continued next week.)

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get them subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

Contributed Articles.

Bees and Pear-Blight—Some Information.

BY J. E. JOHNSON.

ON page 77, Mr. Mitchell seems to doubt the truthfulness concerning my having 900 pear-trees free from blight, and prefers affidavits from disinterested neighbors. Now, my neighbors are all pretty much interested, but if he will write to the bank of Williamsfield, Ill., or C. C. Davis & Co., grain merchants, or the postmaster at the same place (enclosing a stamp for return postage), they will enlighten him.

I have also 900 other trees—peaches, apricots, Japan plums—and will plant more pears this year. I am, however, a very small orchardist compared with many others. W. S. Mounts, of this State, has 11,000 pear-trees, and is a successful grower, and bees spreading blight does not worry him much.

It is not my intention to misrepresent, or boast of my ability, but I have very carefully studied the success as well as failure of other growers, have also studied somewhat about chemical physiology and pathology, and have a microscope strong enough to reveal the blight bacteria and some other agents of the plant-life called bacteria or microbes, but it does not make them as large and plain as I should wish. For the benefit of some let me say that the bacteria family are vegetable organisms, and do not belong to the animal kingdom; their mode of propagation is by a process of budding, and they increase very rapidly only in the elements favorable to their propagation, and no blight could exist except as the result of a microbe; and if we care for our trees as Nature has intended, they will not become favorable to the propagation of said organism, hence they would be blight-proof.

I do not wonder that my article on page 77 was criticised, as I did not write it for publication. I'll tell you how it was. At the Chicago convention Dr. Miller asked me to write to him and explain certain things in which we were both interested. The article was extracts from that letter. The Doctor has been patiently answering so many of our questions, and helping us out of our many troubles that I think he has begun to rejoice in our tribulations, and as I did not have any particular trouble he thought he would hunt me up a little, so he sent it to the American Bee Journal for publication.

Well, criticism taken in moderate doses is very healthful, and I am thankful for it.

Now, from what investigations I've made, and from what experience I've had, and I might say from many other fool notions, I'll try and tell you my opinion of pear-blight.

The natural home of the pear is in temperate Europe and Asia. Pear-blight is a thing unknown except in America; bees are known nearly the world over. In central France a pear-tree that was over 600 years old was destroyed a few years ago by storm. It was known as the Queen Anne pear-tree. In the suburbs of Boston are French seedling pear-trees nearly 200 years old, free from blight. In Illinois are pear-trees from 60 to 80 years old bearing regular crops, and have never had blight; these are French seedlings, and have been neither fertilized nor cultivated.

Almost any pear-tree will grow rapidly in soil poor enough to starve an apple-tree to death. Their roots penetrate the earth deeper than any other fruit-tree, which shows plainly it reaches some element not abundant near the surface. And I claim that when a tree is heavily fertilized with nitrogenous manure the growth is forced unnaturally, and will cause too abundant a flow of sap to the buds or blossoms, or any part of its new growth, and that the super-abundant supply of sap becomes favorable to the propagation of the blight bacteria, which is one of the agents of fermentation, plainly distinguished by the odor. I think the blight bacteria can and does live in the air, especially when moist and warm. Natural warm air is always moist, and contains more water than cold air, and moist, warm weather is very well known to be very favorable to the spreading of blight, in my opinion, from two causes, viz.: First, by causing abundant sap in the tree; second, by being favorable to the blight-germ.

There are hosts of different kinds of disease-germs in

the air we breathe, and in the water we drink, but they do not produce sickness unless some parts of our bodies are favorable for their lodgment, when they will propagate and cause sickness. Now, the air always contains water, and what we call pure water also contains air. A pear-tree, body and branch, contains both water and air. The air in the sap, or water of the tree, contains nearly 35 percent of oxygen which passes from the earth through the body, branch and leaves; also the air, not in the water of the sap, which contains only 20 percent of oxygen, which is inhaled by the leaves. Now, if the blight-bacteria live in the moist, warm air, and the tree itself contains air, the air contains water, and so does every live tree, what is to hinder it from entering any part of its new growth and propagating if the sap is favorable to its propagation? I believe there is a limit to the amount of sap any tree can carry, and when there is a super-abundance of sap, or an element of that sap, it becomes subject to the agents of fermentation, of which the blight-bacteria are members. Some varieties are either able to utilize more sap, and form into wood or fruit-growth, or are more careful in the selection from the elements of the earth, therefore more proof against the germ. Rapid growers are not always the most subject to blight, but any variety will blight if abundantly stimulated.

From what experience I have had, and from what investigations I have made, I am led to believe that although the blight-bacteria will live in the nectar of the blossoms, they will not bud and propagate there unless in rainy or moist weather, which would tend to prevent the bees from utilizing the nectar, or rains or heavy dews which would dilute the nectar, thereby rendering it subject to fermentation, and therefore the bees would be, to a certain extent, a means of prevention of blight by keeping the nectar from becoming soured or stale. It is a well-known fact that seasons that are dry, and the bees working on blossoms every day, are just the seasons when blight spreads very little; and seasons of rainy weather, when bees are hindered from working on blossoms, are the seasons when blight often does the most damage.

That bees are agents in destroying the means of their own existence is contrary to the laws of Nature, which are God's laws, and always correct.

In conclusion let me say, do not understand me to mean that a pear-tree must be starved to be healthy, but that it must not be stimulated. Analysis of the pear-fruit shows that generally it contains about one-third less nitrogen than the apple, and more than twice the amount of potash, three times the amount of lime, and nearly twice the amount of phosphoric acid and sulphuric acid. Therefore, feed the tree the elements it uses when it bears heavily. All these elements are present in the soil, but the element used is what should be replaced. Abundance of nitrogen causes rank wood-growth. Phosphorous is a mineral, very essential to pear-trees. Potash is the backbone of all fruit-manures. The last two are abundant in wood ashes. Potash gives color and flavor to fruit, and makes trees productive. Nitrogen retards production.

Knox Co., Ill.



Suggestions to Writers—Queen-Rearing.

BY ARTHUR C. MILLER.

ON page 55 is the conclusion of an article by Mr. Adrian Getaz, which has appealed to me in several ways. It is quite evident that some of the criticisms to which he has been subjected have hurt, and lest it should cause him more or less to cease his writing, I want to begin this article with a word of cheer to him, and to all others who are sincerely and *unselfishly* trying to advance the science of bee-culture to the end that it may become both a more pleasant pastime and a more profitable business.

He complains of being accused of dogmatism. Well, that is a trifle. There are two classes of persons prone to use that accusation against an author—those who are envious, and those who are prejudiced, and neither are worth considering. But the assertive, dogmatic style, while not conducive to popularity, serves a very useful purpose—it arouses *opposition*. This, when aroused in the mind of another enthusiast, is conducive to new investigations, deeper research, and live discussion. Ofttimes the dogmatic form is the only one that will arouse some persons, but, once aroused, their work and their writings are well worth all the censure, criticism and pain it took to get them.

Again, he complains of being taken to task for not

embracing in a single article everything relating to a topic. Some people want a free text-book with every issue of the paper.

Yet, again, he writes of being tasked with not being up-to-date on biological matters. A recent remark of a biologist may console him and some of the rest of us: "The only way to be up-to-date in biology is to live in the 'to-morrow.'" Theories are like a clothes-horse—while the latter are to hang clothes on, the former are to hang experiments on. If they will support the experiments they are good, and we call them "laws;" if not, we cast them aside and make new ones.

Further along, Mr. Getaz remarks on some details of queen-rearing, and names "three imperious conditions." I think that if he will consider the following, and will carefully experiment thereon, he will revise those conditions:

The first and greatest essential—the one without which all else is useless—is a nurse-force of *young bees*. Furthermore the presence of old bees is a detriment. Size of nurse-force is a relative quantity.

The second essential is, eggs, or larvæ under three days from the egg.

And, third, the presence of *pollen*, and honey or syrup readily accessible to the nurses.

To explain: Young bees do all the nursing. Old bees, when present with them, sometimes help themselves to "pap" which should go to the development of larvæ. This is particularly so in inclement weather.

Size of nurse-force should be governed by three things—season of year, number of cells to be "grown," and hive-chamber, its shape and size. A nurse-force of a given size can care for more cells if they are grouped in the center of a chamber which the nurses nearly fill, than if strung out in a long row in a chamber which the nurses can only partly fill.

The second condition is well understood and acknowledged.

The third is all too often forgotten, at least the pollen part. To obviate any chance of scrimping of larval food, it is essential that pollen should be present in the queen-rearing colony; and whether honey is present or not, or whether or not nectar is being gathered, more uniform results are secured and danger is removed by keeping a supply of *syrup* in a feeder always accessible to the bees.

To prove the correctness of the foregoing, take a pint of young bees—those just preceding the age of field-work and younger; give them eggs or larvæ for two to four queens and the other conditions as stated, and fine queens will result. Also take a peck, more or less, of old bees—field-bees; give them any number of eggs or larvæ you choose, and all the other conditions, and not once in a thousand will the resulting queens be worth the bother of killing.

Providence Co., R. I.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Fastening Foundation in Sections.

Mr. Erdman, on page 108, tells how he controls the heat from the lamp while fastening foundation in sections with the Daisy fastener. I use the Daisy fastener, but have never had any trouble in controlling the heat, by turning the flame of the lamp up when I wanted it warmer, or down when I wanted it cooler.

Have any of the sisters had any of the trouble mentioned?

Bees Short of Stores—Feeding.

On account of sickness and lack of help I failed to prepare my bees for winter. Before I could attend to them some colonies died for want of food. I fed them the best granulated sugar, two parts sugar to one of water. I fed them in a glass fruit-jar with cloth tied over the top and inverted. They will carry down two quarts during the night; some I have fed six quarts. I am sick with la grippe, and unable to attend to them. I forgot to say that the last

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two times I fed them my daughter was sick, and the sugar was made into a good syrup, but not near the boiling point. Some that was left was all crystallized, and I am afraid it is that way in the hives. If so, is there danger of the bees starving? I know there is plenty in there if they can use it. Please let me know whether they are safe, or if there is anything I can have done, as I think of them all night long. Cass Co., Mo., Feb. 3. LUCY M. WAGNER.

You say that your syrup crystallized, and you evidently fear that the trouble came from not boiling the syrup.

It is not at all likely that boiling syrup makes any difference. It would crystallize just as quick after boiling as before. The sugar is already cooked as thoroughly as it can be, all it needs is to be dissolved. All the boiling does to the sugar is to dissolve it. Cold water will do that, too.

The right thing to do is to feed early, and feed thin. That will give the bees a chance to evaporate and make the chemical changes necessary to prevent granulation.

If you use a Miller feeder you can put in the syrup, or you can put in the dry sugar, anywhere from one to 15 pounds. Then make a depression in the center and add a very little water at first. After that has soaked slowly through the sugar, so that the first that goes into the feeder will be sweet, you can add as much water as you want to—you need not bother to measure it. Of course, the amount of water used must be governed somewhat by the amount of sugar used. If you use only one pound of sugar, you would hardly fill the feeder full of water, but if 15 pounds is used you can put in as much water as will go in. When the bees have taken it up, put in more water, and so on until all the sugar is used up. This is an easy and nice way to feed.

A crock-and-plate feeder can be used also with sugar and water. But remember you can not feed thin feed late in the season, because too-thin feed is unwholesome for winter stores.

When late feeding must be done, use five parts sugar to two of water, and add one even teaspoonful of tartaric acid to 20 of sugar to prevent granulation. It is better to use the feed hot, for the reason that the bees will take it down faster.

If you have extracted honey you can make Scholz candy and feed them candy in place of syrup. In winter this will be very much better.

What you want to know is, What to do about it now. It is not likely that your syrup crystallized so badly but that your bees can at least use part of it. The first warm day it may be well to examine and see how the matter stands. Then supply what is lacking by giving them Scholz candy, or, as you are so far South, and it is getting so late in the season that it is likely your bees will have a flight every two or three days, you can give them thin syrup.

A New Stove-Blackening.

Instead of blacking the kitchen stove, to smut utensils, hands, and flat-irons, dissolve beeswax and gasoline and rub it over the stove when cold. The result is a very good imitation of blacking, and there is neither dust nor smut.—National Stockman and Farmer.

* The Afterthought. *

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

OSMOSIS, UMBILICAL CORD, ETC.

And Osmosis wishes to exterminate the Umbilical Cord. First we know the Umbilical Cord will sail in to exterminate Osmosis; and, dreadful to see, they may Kilkenny-cat each other. Well, if Atavism sitting on the fence is left to us we'll manage to get along. Page 45.

FEEDING IN THE OPEN AIR.

The inverted can, resting on a square of thick cloth—and lots and lots of them—for feeding the whole apiary in the open air. Very simple; and yet it has not often been suggested before—if at all. A. F. Foote, page 45, finds it to work well. Chances to fail with it though, I surmise.

POROUS COVERING FOR HIVES.

Mr. Holtermann's style of putting the argument in favor of porous covering in outdoor wintering will sound unusual to some. May be all right just the same.

"If the change of air has to be accomplished by the entrance alone, the bees must exert themselves to create a draft, and this is not good."

Is it common, even when air inside gets pretty bad, for bees to fan in winter? I'm not positive, but incline to say it is not. Of course, they do not fan except when the cluster is broken up, at least to some extent—but perchance few of us know exactly how often that takes place. Page 54.

A COMB FOUNDATION SEPARATOR.

A foundation separator—to hold up part of the weight of the bees, and to make it impossible for them to elongate the adjacent cells. This is not for sections but for full depth combs. Defends their full space, and keeps them from being built with protuberances and hollows. This appears to be a good thing. Morley Pettit, page 54.

DIFFERENT BREEDS AND QUALITIES.

Mr. Getaz will probably admit that different breeds of cows give milk of different qualities and decidedly different richness; but I see he rigidly bars off anything of the kind in different breeds of nurse bees.

May be
If Mr. G. he
Was a ba-bee bee
He would more light see—

and cry for some of that Jersey Food instead of that old thin stuff. Page 55.

FRAME OF BROOD AND SHAKEN BEES.

J. T. Hairston reads his experience that a frame of brood does harm in a shaken swarm, and that they stay better without it. Rather strange—but genuine experience among bees will now and then be strange. As to their starting queen cells on it the first thing, I rather guess that's something more than merely local and exceptional. Frame can be taken out again after being in a week and serving its purpose to prevent absconding. Page 55.

NON-LEAKING SHIPPING CASES.

Queer that so obvious a device to prevent cases from leaking was not more talked of and used long ago. (Paraffin or wax melted and run around the corners.) With either plan in universal use the wholesale man would find some cases leaking. Which plan on the whole would conduce to the least leaking? On the one hand there's the didn't-see-'em cracks and holes, and the springing loose due to being mercilessly banged on the road, or due to poor nailing. On the other hand, there's the blunderer who spoils the tray in the first instance, and the examination blunderer, who takes out a section to look at and tears down the paper wall as he rams it recklessly back. But on the whole, I guess the paper trays have it. Among other merits they keep the wood from soaking until it looks badly, so the cases are nicer to use a second time. Pages 59 and 52.

DR. LAMBOTTE'S IDEAS ABOUT FOUL BROOD.

"Powerful weak"—is Dr. Lambotte's attempt to upset the established ideas about foul brood. Providing, that is, that Adrian Getaz, on page 62, gives us a fair idea of the argument. If the field was entirely clear, and nobody knew a thing about the cause of foul brood, he ought to make a more conclusive case for his explanation and bug before inviting the whole world to adopt his views.

HONEY ON TIRED EYELIDS.

How does that honey on the eyelids operate to rest the tired eye inside? Want to know, you know. If the parts surrounding the ball are fevered (quite likely they are in such a case) I can imagine that closing the pores of the skin might check the local fever, and that when the local fever was checked the eye would get well faster. When I was a boy and hands got desperately sore and crackled up in the autumn winds, plenty of honey rubbed on and stockings drawn over to keep from daubing the sheets would take the fever all out between bedtime and morning, and give the cracks a nice start toward healing. Page 67.

The Premiums offered this week are well worth working for. Look at them.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Tartaric Acid in Syrup—A Correction.

On page 89, the statement is made that to prevent granulation of syrup an even teaspoonful of tartaric acid should be used for each 30 pounds of sugar. I don't know whether the fault was mine or the printer's, but that 30 should be 20. It is possible that the smaller quantity would do in some if not most cases, but the teaspoonful for every 20 pounds is surer. The better plan, however, is to feed so early and so thin that no acid is needed. C. C. MILLER.

Recipe for Making "Good" Gandy.

Please give the recipe in full for making the "Good" candy for bees to winter on. I have extracted honey and sugar.

Answer as soon as possible. I have no text-book and cannot find any recipe. ONTARIO.

ANSWER.—Heat the extracted honey, being *very sure* not to burn it, and stir it into the sugar till it seems quick thick, and take it from the fire. Then pretend you're kneading bread dough, with sugar instead of flour. Have the dry sugar on your bake-board, put the sugar-dough on it, and knead all the sugar into it you can. Let it stand a day or two, and then knead some more sugar into it until it is quite stiff, unless it is already quite stiff. That's all there is of making the Scholz or Good candy.

You probably have little idea how much a text-book on bees would be worth to you.

Taking Bees Out—Best Extracting-Frames—Chunk Honey—Best Bees.

1. I have 14 colonies of bees in a cellar that I made in a bank. It is 6 feet square by 5 feet high, and an A-shape roof with an air-pipe in the center of the roof. I put the bees about a foot from the ground. The cellar is very dry. The bees seem quiet so far. What time do you think will be the best, in this climate, to take the bees out in the spring?

2. Will pure honey sour before candying, or afterward?

3. Which is the better frame for extracting, the shallow, or regular Langstroth frame?

4. Which is the most profitable to produce, chunk honey or extracted?

5. What strain of Italian bees do you consider the best? And to what kind of bees do you give the preference?

IDAHO.

ANSWERS.—1. I don't know enough about the climate in Idaho to say. A good time is about the time red or soft maple is in bloom; but you may not have any trees of that kind in your neighborhood. When they can fly out frequently, say every three or four days, you will be safe to take them out.

2. Yes, it may if it is thin enough, or is in a place where it becomes thin enough.

3. A shallow frame is considered preferable, but many use the regular Langstroth frame so as to have only one kind of frame.

4. That depends largely upon your market. If there is a good market for chunk honey at a fair price, that is best; otherwise not.

5. Those that give the best results in storing, no matter what kind or color. The leather-colored Italians are perhaps as hopeful as any; but leather-colored Italians are by no means all alike.

Full Drawn Combs vs. Starters—Dummies.

1. I have been reading that full drawn combs are not the right thing to use, but to use starters. What would be the

best thing to do with old combs that are in hives where the bees had died? Could not the cells be shaved off and just the base or foundation be left, and then let the bees have them just as you would foundation?

2. What are dummies made of, and how are they made?

I will give my experience with a swarm inside of a house. Last July (5) I went over to Perry to visit a friend of mine, and he had a swarm in the side of his house which had been in there for eight years. They had gone in at the corner of an upstairs window, and they had built combs up and down, and between one of the studdings of the outside of the house, and had then gone in between the upstairs floor and ceiling of one of the lower rooms. There were combs that were 10 feet long. I secured 100 pounds of white honey that was free from pollen and young larvæ. The queen was the largest I ever saw, she was a third larger than any in my apiary at home, cells that were like large peanuts. They were crossbred bees I ever worked with, being a gray color. I took them out and put them in a new hive, and they stored enough to keep them this winter. I will report more about this swarm of bees the coming summer. IOWA.

ANSWERS.—1. Most bee-keepers would count old combs out of which bees had died as valuable stock, and would give them to bees to use over again. Better find out whether starters are better for *you* than are full combs before you decide to prefer the starters.

2. A dummy is made of wood, pine being the best wood for it. Make a board with a top-bar to it so that the whole thing shall be much the same as a frame filled out solid with wood. It may be an inch thick, but $\frac{3}{4}$ inch in thickness will answer as well or better, depending upon where you mean to use it.

Bee-Sting Remedies.

Some bee-keepers may congratulate themselves for receiving slight pain when stung by a honey-bee, while others have to bear intense pain, as was my case last summer. In hiving a swarm I had the misfortune to receive a sting on the left ear. After a short time, about five minutes, I began to itch intensely, then my entire body broke out as though I were stung all over by the bees. What is a good preventive for a sting? I used spirits of ammonia, but to no effect. ILLINOIS.

ANSWER.—In the case mentioned, the best preventive would have been a bee-veil. If you mean the best remedy, there is none. Perhaps it might be better to say there are hundreds of them, for nearly every one will tell you of this or that remedy that has proved best. Possibly nothing is better than a local application of common mud or wet clay, of course, getting out the sting the first thing. When the whole body is affected in the way you mention some have found relief by a pack in a wet sheet. If you have not had many stings it is quite possible that after receiving a few more the system will become so habituated to it that there will not be any very bad results from a sting. In some cases, however, the results continue to be so bad that it is advisable to give up trying to work with bees.

Questions on Management.

1. Can I make a weak colony strong in the spring by taking a frame of hatching brood and adhering bees from a strong colony and adding it to the weak one?

2. Can old comb be wired? If not, can I use it in the extractor?

3. If bees are shaken on starters only, as suggested by many bee-men, would they not build too much drone-comb in the brood-nest?

4. If I can increase by taking a frame of brood, having a ripe queen-cell, from a strong colony in the spring, and put this in nucleus, should an empty comb take its place in the old hive?

5. A sheet of foundation is put in a hive between two combs; now, the bees will, in most cases, bulge the combs on either side of this sheet of foundation, instead of drawing it out. What is the remedy? KENTUCKY.

ANSWERS.—1. It will make it stronger—probably about 5,000 bees stronger, if it is a pretty full frame—but it depends upon how weak the colony is whether that will make it a strong one. As a general rule one frame of brood would not make a weak colony strong. But look out that you do not do more harm than good by taking brood from a strong

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colony to give to a weak one. The frame of brood will do more good in a strong colony than in a weak one, unless the strong one be very strong.

2. You cannot wire them, but you can use them in the extractor without wiring. Thousands of combs were used in extractors before wiring was known.

3. There is much danger of it. Some practice giving four or five frames with starters, and when these are about filled giving the balance of the frames filled full of foundation.

4. One frame of brood will do if you have bees enough with it. If you mean to take only the bees adhering to the one frame of brood, that would be a rather weak nucleus. Two frames of brood with adhering bees would be a good deal better.

5. If you put a sheet of foundation right in the middle of the brood-nest, with brood each side of it, there will be no bulging where the brood is, and perhaps none at the upper part if the honey is sealed there. If there is unsealed honey in the upper part, there is likely to be bulging there, and you can remedy the matter by slicing off the bulged part. You can also keep the frames of foundation at one side of the hive.

Italianizing—Shaken Swarms—Stimulative Feeding—Transferring.

1. What time next season would it be best to Italianize my bees, to secure the most honey and pay me all around? They are blacks, and rather poor workers (in 8-frame hives).

2. In practicing shaken swarms, should the super be put on at once, or wait until the brood-chamber is nearly filled? In shaking bees off combs would the queen be injured? And would the remaining bees (say one-sixth) in the old hive, with brood, rear a good queen? Would you use starters or full sheets of foundation in this plan?

3. Would it pay to practice stimulating feeding next spring? When should I commence in this locality (Southern Iowa), and how much a day should I feed? This locality is poor for spring bloom, and bees are rather light.

4. I have some bees in a box-hive to transfer. Would you transfer in fruit-bloom or wait until about swarming-time, and use the forced-swarm method? IOWA.

ANSWERS.—1. A little difficult to say. So far as concerns getting in better stock, the sooner the change is made the better; but then the change is in danger of interfering somewhat with the progress of the colony. Besides it is easier to get good queens later, so it may be well not to make the change till the harvest is well under way.

2. Supers may be put on at once if an excluder is used; otherwise wait two or three days till the queen has a fair start at laying below. The queen is not likely to be injured by being shaken off the combs. I would not expect the very best queens reared in the hive with only a few bees, and a good deal of time would be lost if the start was made with a young larva. Full sheets of foundations may be given, or else four or five frames given with starters, and when these are filled give the balance with full sheets.

3. Unless you have a good deal of experience, you may do more harm than good with stimulative feeding, but if you want to try it better try it with part of your colonies and see how they compare with the others. Do not begin till bees fly every day, and then feed a pound or so every other evening.

4. Very likely it will be better to wait till swarming.

Moving an Apiary a Short Distance.

I have two small apiaries located about forty rods apart. One apiary contains eight colonies. I moved them in a row, placing them about four inches apart, and packed them with

chaff on all sides, excepting the front, which is south, and placed a board before the entrance of each hive. They seem to be doing well at this date.

The other apiary contains twenty-one colonies, and is packed in the same manner. In the spring I wish to move them to a new location, together, about midway between their present locations. What precautions should be taken in moving them, and when should it be done? OHIO.

ANSWER.—If it were not for the packing you could move them any time now. But it is better not to disturb the packing until later, so you might postpone the moving until time for spring flight. If you could move them just before their first flight it would be well. When a day comes with the temperature at 45 degrees or higher in the morning, and rising all the time, with a bright sun and not windy, you may be pretty sure of a good flight-day, and then will be a good time to move them. Shut the bees in the hives, handle the hives roughly in moving them, and when it gets warm enough for them to fly freely—say 50 degrees or more—pound on the hives well, and then open them. First, however, it will be a good plan to make everything on the old locations look as different as possible, so that they shall not look like home to the bees. It would be no harm also to put boards in front of the hive entrances.

Forced Swarming.

I wrote to you about one year ago asking advice concerning a colony of bees that I had which I feared had foul brood. I want to report now that I found later that the disease was foul brood, and I found four other colonies with the disease, all of which I treated on the McEvoy plan in June, with entire success, at least I have not seen any symptoms of it since. I examined them carefully several times, and made a special examination when I fixed them for winter in October, and I believe they are cured.

Now, Doctor, I want to adopt the forced-swarm plan the coming summer; I do not want to increase. I have read what has been written lately in the bee-papers on this subject, and yet, when I think of doing the work on the plans suggested, there are a few questions that arise in my mind.

1. To have no increase I must make three drives, the second one in 21 days. Will the second and third drive be accepted by the new colony without quarreling? And if not, how shall I proceed to make them behave peaceably?

2. May there not be a new queen in the old hive, and laying some time before the third drive, or should I cut out the cells? OHIO.

ANSWERS.—1. The business is expected to be done at a time when bees are gathering and not at all inclined to be quarrelsome, so no precautions need be taken.

2. When you make a shaken swarm you are expected to shake the combs, and to shake them hard. That will destroy all advanced cells, at least all sealed cells, at the first drive. The same thing will occur at the second drive, leaving no chance for a laying queen at the third drive. If a virgin queen should be present, she can be left to the tender mercies of the bees.

Allow me to add that there is no law compelling you to make a third drive, and, between you and me, I don't believe I'd make any drive after the first. You can shake and brush off all the bees at the first drive, and then you're done with it so far as that colony is concerned. Then you can pile up the beeless brood on some weak colony, piling it up till you have four, five, or six stories of brood, an excluder preventing the queen from laying in the upper stories. Then when the brood has hatched out, you can take away the combs, or leave them to be filled with honey. If you are so unfortunate (?) as to have no weak colony, you could use a strong one.

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FROM MANY FIELDS.

(Continued from page 130.)

consequence they would not be so rare or valued so highly.

Now, Mr. Alley, my queens are all good enough to breed from except one, and one that was reared from a worker-egg; and furthermore, with the exception of that one, there is not more than \$10 difference between the best and the least among them, and I have some colonies that cover ten Hoffman frames this cool weather, and I am not afraid to bet on



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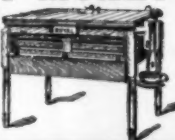
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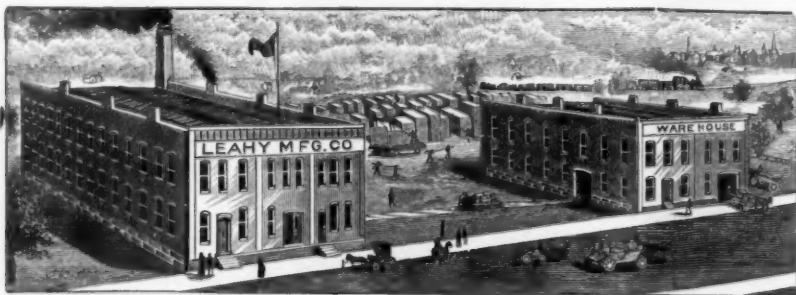
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it that you can't rear a queen from an egg taken from a worker cell that will have a colony that large at this time of the year.

In reply to "The Charge of Dr. Gallup," a bit of poetry on page 44—I wish to say that I do not condemn queen-saving or queen-selling, but I do say, and say it from experience, that I honestly believe that the only queens that are really of any value are those reared from eggs that the queen deposited in cell-cups, and that any queen reared from worker-eggs is worthless. Furthermore, if any queen-breeder wants to rear good, long-lived queens, just bring about the condition in a hive where the bees will start plenty of cells, and the queen will lay in them and save all the cells, and send out those queens to your customers and let me hear about it and I will probably want some myself, but I won't have them shipped with a few bees by mail, but with at least two Hoffman frames and bees by express.

In the last verse of said poetry above referred to, "big guns" are mentioned. Don't you know big guns are out of date, especially those black powder, smoky kind? We use only high-pressure smokeless powder and quick-firing guns on this coast.

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Bee-Keeping in Texas.

While bee-men in the north are wishing that their beehives were blocks of priceless coal, I am tempted to write a few lines to apprise you of conditions in central Texas, with special reference to the bees.

During the month of January we have had but three frosts; the days have for the most part been warm and sunny, and the lowest temperature recorded for the month was 24 degrees (that's above zero,

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you understand). To-day, Jan. 27, has been the warmest recorded, being 78 degrees in the shade. For the past week the bees have been out sunning themselves and incidentally getting into all kinds of mischief. There is little for them to gather at this time of the year, and nothing but a small boy can get into more mischief than an apiary of idle bees.

To-day I made a formal call on all of them. By the Carniolans I was received peaceably; by the Holy Lands with indifference, and by the Cyprians with many objections. However, all had sufficient stores, and were soon left to their own sweet will. A colony of pure blacks, which I captured in the woods last fall, and which are not yet thoroughly tamed, boiled out of the hive in confusion when the latter was opened, and the whole colony tried to get away, but ultimately returned, as good bees should. Have you ever noticed that you can domesticate a colony of "wild" bees by careful handling for a few weeks or months, so that they will not boil over and persist in getting where you don't want them?

And with all our blessings, we now have a honey flow! Not a large one, 'tis true, but nevertheless the bees are daily gathering pollen and a little nectar from both the Japan quince and from mignonette, both of which are cultivated upon the college campus. And, by the way, that Japanese quince acts very much as if it would be valuable if cultivated for honey—not for a surplus crop, but for spring building—as it is perhaps the earliest bloomer of all native plants in central or eastern Texas.

We expect our honey flow to commence about March 1. Abundant rains have blessed all parts of Texas, which is an almost infallible indication of a good honey crop the spring following. Unless

ORCHARD STARTING

would be the rage this spring if people could see our nurseries. Of apple trees 3½ to six feet high, the showing is seldom approached, certainly nowhere this year. Every one guaranteed on whole roots, full of vigor and strength. No sign of disease.

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Practical Apiarist Wanted for the season of 1903, or longer, to work with experienced manager of large apiary. State age, experience, references, wages expected, etc. Single man with ability to use carpenter's tools preferred. Address, P. E. G., care AMERICAN BEE JOURNAL, 144 E. Erie St., CHICAGO, ILL.



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very unfavorable weather prevails during the honey season—as so many showers as to wash the nectar from the blooms—Texas will probably produce the coming spring one of the largest honey crops on record.

So, while you pass the "long winter evenings" (which to us are unknown), reflect that there is one place in the United States where the bees need no cellar, and the bee-keeper cares not one whit about the price of coal.

WILMON NEWELL.

Brazos Co., Tex., Jan. 27.

An Old Subscriber.

MR. EDITOR: Some weeks since I saw a communication in the AMERICAN BEE JOURNAL from one of your subscribers stating how long since he commenced taking the "Old Reliable." Well, I imagine that I rank among the oldest of your patrons, having been a regular subscriber to the first eight volumes (which I had bound in calf and still possess); also at irregular intervals ever since when I was at home and not engaged in business which prevented me from giving proper attention to my bees. I have never since 1872 kept more than ten colonies (generally less); just enough to supply my children and grandchildren with a little "sweet-tooth-filler" semi-occasionally. It is with unalloyed pleasure that frequently I take down those old volumes and reread the articles by the fathers in (American) apiculture—Alley, Doolittle, Gallup, Grimes (deceased), A. I. Root, and a host of others whom my failing memory cannot recall.

I remember one subject of discussion which I have not seen mentioned for years, and which I fancy most of the modern bee-keepers take but little interest in, viz.: Parthenogenesis. However, I am intimately with some "tots" (embryo bee-keepers, possibly) who exhibit considerable familiarity with the Greek polysyllable, because, whenever they visit their grandsire, he organizes a spelling-class of eight members, to each of whom that succeeds in spelling "parthenogenesis" correctly he gives the choice of a bright new dime (a supply of which he keeps on hand for the purpose) or a section of honey.

Now lest some one of the younger generation should say "Will that garrulous old fellow ever cease his chatter?" I will simply say I am, Your most obedient,

KOMPPOHAKELLEREMON.

Carniolan-Italian Bees.

Some time ago I saw a request in the AMERICAN BEE JOURNAL for information about the Carniolan-Italian bees. In reply to that request and for the benefit of those who may desire to know something more of them I will say that I am now using those bees largely. That is to say, I have over 150 colonies and have had two years' experience with them. For me they are greatly superior to the

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That our line of Bee-Keepers' Supplies are some of the best goods in the world, and that our system of dealing with our trade is not excelled by anybody. Plenty of testimony from satisfied customers proves these things. Write and get our suggestions, our catalog and our discounts for winter-time orders—ALL FREE.

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The best book on strawberry growing ever written. It tells how to grow the biggest crops of big berries ever produced. The book is a treatise on Plant Physiology, and explains how to make plants bear Big Berries and Lots of Them. The only thoroughly bred scientifically-grown Strawberry Plants to be had for spring planting. One of them is worth a dozen common scrub plants. They grow BIG RED BERRIES. The book is sent free to all readers of the American Bee Journal. Send your address to

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FREE Our handsome Garden Annual and Seed Catalogue. Send your address on a postal to-day, or for 4c. in stamps and the names of 3 neighbors who are actual seed buyers we will send our catalogue and packet of the Giant Red, Madam Perret PANSY if you write before March 15th. Address, **COLE'S SEED STORE, Pella, Iowa.**
SD4t Please mention the Bee Journal.

That Harrison Apple-Tree Sale.—An opportunity for starting an orchard or planting even a few select trees is now afforded fruit-growers which does not recur every spring. The great nurseries of Harrison & Sons, of Berlin, Md., have been for several seasons making a specialty of root-grafting, and growing of apples with intent to make wide sales in the spring of 1903, and by supplying a superior article in trees secure a vast spread of their trade in a single season. The object sought was to be obtained in price. From information we have through other sources than the proprietors, a view of the Harrison nurseries right now is a sight to gladden the eye. There are multiplied thousands of trees which, as was the design of the Company, are in the pink of condition for spring planting. Trees coming from this source are always in good health. This spring they are especially clean, smooth and vigorous. Everyone is upon a whole root-graft and the rooting is strong. It was a part of the plan to have every variety worthy of attention come in at the same time. Accordingly, over 100 varieties, Summer, Fall and Winter apples are ready to meet the requirements of growers. The trees are classed for sale and shipping purposes as 3 1/2 to 5 ft., 4 to 6 ft., and 5 to 6 ft. As special care has been taken in the production of stock, so it is to be exercised as well in the packing to the end that every order shall reach the purchaser in the pink of condition. The Harrison people are guaranteeing absolutely safe delivery of this stock anywhere in the United States. Anything which from any cause arrives in poor condition is to be replaced. A special apple-tree list showing varieties, sizes, etc., has been prepared to send to inquirers about this stock. If you plant even a few trees this spring, don't fail to write for it. Please mention the American Bee Journal when writing.

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Italian and they far excel the Italian in every good trait save one—they do not stick to their combs as well. They are better comb-builders, and that means superior honey-gatherers. They are more healthy and winter to perfection under varying circumstances. They breed up quickly, and always stand ready for a honey-flow, short or long. As is characteristic of both races, they load very heavily and readily go over three miles from choice. I have had many opportunities to observe this fact, as there are none of these bees kept in this country except my own. I have found them at that distance by the thousands, and at a time when there was no scarcity of nectar, either.

They are superior for section honey, for the reason that they build the comb to the wood better and cap it smooth and white. They also build much faster, and are always stronger in bees than the Italians. The swarming propensity alone prevents them from becoming popular, though with me they have never given any trouble in that way. I am confident that the expert will find a way to work them; I have my own peculiar system and always produce great results with little or no swarming.

They mostly have the markings of Italians, though finer, and alternating with the white, silvery bands of the pure Carniolans. They are large and very gentle. The queens are dark, rather coarse, larger as a rule than Italians. Candidly, I believe them the best of bees for honey in existence. After having used them for two years I am more than pleased and have decided to do away with my Italians. The latter have not the strong nursing power needed in this locality and linger along all spring before getting sufficient strength to do any gathering. The Carniolan-Italians, on the contrary, are storing when the Italians are only beginning to breed fairly. In the northern climate it may be different; I know that a much smaller force is needed there than with us.

J. E. CHAMBERS.

Concho Co., Tex.

To make cows pay, use Sharples Cream Separators
Book Business Dairying & Cat. 212 free. W. Chester, Pa.

CONVENTION NOTICES.

New York.—The annual meeting of the Oswego County Bee-Keepers' Association will be held at Fulton, N. Y., Saturday, March 7, 1903. Prof. Frank Benton will be present and address the meeting. An interesting program is being prepared, and all persons interested in bees are cordially invited to be present.

MORTIMER STEVENS, Pres.

CHAS. B. ALLEN, Sec.

Ontario.—There will be a meeting of the beekeepers of several counties, and any others, in the Court House at Brantford, Ont., Canada, March 3 and 4, beginning at 7 p.m. March 3. The question of stamping out foul-brood, and practical discussion as to the management of bees will take place. The Dominion and Provincial Governments, it is expected, will be represented, and from present interest a large turnout, even some from distant countries, likely. All welcome.

R. F. HOLTERMANN.

New York.—A series of Bee-Keepers' Institutes will be held in the State of New York as follows: Canandaigua, March 2 and 3; Romulus, March 4; Auburn, March 5; Cortland, March 6; Fulton, March 7; Syracuse, March 9 and 10; and Amsterdam March 11.

Prof. Frank Benton, Apicultural Investigator, furnished by the United States Department of Agriculture at the expense of the Bureau of Institutes of the State Department of Agriculture, will address the meetings.

The New York State Association of Bee-Keepers' Societies will hold its annual meeting at Syracuse, March 10, at 10 o'clock a.m., in the City Hall. Prof. Benton and other prominent bee-men have informed us of their intention to attend this meeting, and a profitable and interesting session is in store for those who attend. Special rates have been secured for entertainment at the Manhattan Hotel, Fayette St., at \$1.25 per day.

C. B. HOWARD, Sec.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).....	\$.75	\$1.40	\$3.25	\$6.00
Sweet Clover (yellow)....	.90	1.70	4.00	7.50
Alaska Clover	1.00	1.80	4.25	8.00
White Clover	1.20	2.30	5.50	10.50
Alfalfa Clover80	1.40	3.25	6.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

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Growing Strawberries. — "Great Crops of Strawberries and How to Grow Them," is a booklet, the advertisement of which has been running in the Bee Journal for some time. It is not a mere catalog but a concise treatise on Plant Physiology, and explains the best methods of developing the fruit-producing organism in the plant so that under the cultural methods prescribed, they double up on the crop of berries both in quality and quantity. It surely does explain how the fruit-producing parts of the plant exist, and how they can be developed, and gives the best modern methods of tillage. Fruit-growers greatly appreciate this work. It gives them a new light and enthusiasm in the work, and is surely working a revolution in strawberry-growing. You can get a copy of this booklet free by addressing R. M. Kellogg, Three Rivers, Mich., and at the same time mentioning the American Bee Journal. You will be delighted with it. Better write for it now.

TREE GROWN FROM SELECTED BEARING TREES
OUR BOOK HOW TO GROW FRUIT SEND FOR IT
FREE FREIGHT WE PAY IT
TITUS NURSERY NEMAHA NEB
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Hives, Sections, Foundation,
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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Feb. 7.—The market is in rather an unsettled state. The offerings of late have been numerous, and there is a tendency towards lower prices, owing to the supply being much larger than expected at this season of the year. The fancy grades of white will sell at 15¢ per pound, but anything below this grade is difficult to place at anything above 10¢@12¢. Extracted honey is also easy, with the best grades of white obtainable at 7¢@8¢, and ambers at 6¢@7¢. Beeswax steady at 30¢ upon arrival.

R. A. BURNETT & Co.

ALBANY, N. Y., Feb. 14.—Honey market is bare of stock here and white selling at 15¢; mixed, 14¢@15¢; dark, 13¢@14¢. Extracted wanted at 7¢@8¢ for white; 7¢ for buckwheat or dark; buckwheat most in demand. Beeswax, 30¢.

H. R. WRIGHT.

KANSAS CITY, Jan. 31.—The demand for honey has been very light; receipts fair. We quote as follows: Extra fancy, per case, 24 sections, \$3.40; strictly No. 1, \$3.30; No. 1 amber, \$3.00@3.25. Extracted, white, per pound, 7¢; amber, 6¢@6½¢. Beeswax, 30¢.

C. C. CLEMONS & Co.

CINCINNATI, Feb. 7.—The demand for all kinds of honey has fallen off considerably in the last few weeks, owing to the many other sweets offered at this season of the year. Lower prices are no inducement to increase the consumption, as the demand is not there, and will not be until about the end of the month; consequently it is folly to offer at lower prices. We quote amber extracted in barrels at 5¼¢@6¼¢; white clover and basswood, 8¢@9¢. Fancy white comb honey, 16¢@17¢; lower grades hard to sell at any price. Beeswax firm at 30¢.

THE FRED W. MUTH CO.

NEW YORK, Jan. 23.—Demand for comb honey quiet on all grades, and prices show a downward tendency. Supply quite sufficient to meet demand, if not more so. We quote fancy white at 15¢; No. 1, at 14¢; No. 2, at from 12¢@13¢; dark and buckwheat, at from 11¢@12¢.

Extracted also quiet with abundant supplies with the exception of white clover. We quote white at 7¢; amber at 6¢, and dark at 6¢. Common in barrels from 60¢@65¢ per gallon.

Beeswax firm at from 29¢@30¢.

HILDRETH & SPOHLER.

CINCINNATI, Feb. 7.—The comb honey market continues to be draggy and hardly any demand and therefore prices have weakened. Fancy white clover comb sells for 15¢@15½¢; for amber there is no demand. The market for extracted is fair and prices rule as follows: Amber, 5¼¢@5½¢, by the barrel; in cans it brings a little more; alfalfa, 7½¢; white clover, 8¢@8½¢. Beeswax, 28¢@30¢.

C. H. W. WEBER.

SAN FRANCISCO, Jan. 14.—White comb honey, 11¼¢@12¼¢; light amber, 10¢@11¢; dark, 5¢@6¢. Extracted, white, 6¢@6½¢; light amber, 5¢@5½¢; amber, 4¢@4½¢. Beeswax, good to choice, light, 26¢@27½¢; strictly fancy light, 29¢@30¢.

The country merchant, representative of trade interests, estimates "entire stock of honey of 1902 in the State at 15 cars," worth 5¼¢@6¢ per pound at primary points, subject to a \$1.10 freight-rate to the East.

WANTED WHITE CLOVER EXTRACTED HONEY!
Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.

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BEES FOR SALE.—85 colonies of Italian Bees, as a whole lot in small lots to suit purchaser. Also a lot of Fixtures. Correspondence solicited. Must sell, account husband's death. Call or address, MRS. L. A. BURTON, 8A2t SPEIDEL, OHIO.

Honey For Sale.

2000 lbs. Basswood Extracted honey, at 9¢ a pound. All in 60-lb. cans. Warranted PURE HONEY. JOHN WAGNER, BUENA VISTA, ILL.
5A1t Please mention the Bee Journal.

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We will present you with the first \$5 you take in to start you in a good paying business. Send 10 cents for full line of samples and directions how to begin.

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The best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us you will not be disappointed. We are undersold by no one. Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—

W. T. Falconer Mfg. Co.,
JAMESTOWN, N. Y.

W. M. GERRISH, Epping, N. H., carries a full line of our goods at catalog prices. Order of him and save the freight.

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ROOT'S GOODS AT ROOT'S PRICES

Everything used by bee-keepers.
POUDER'S HONEY-JARS. Prompt
service. Low Freight Rates.
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WALTER S. POUDER.
312 MASS. AVE. INDIANAPOLIS, IND.

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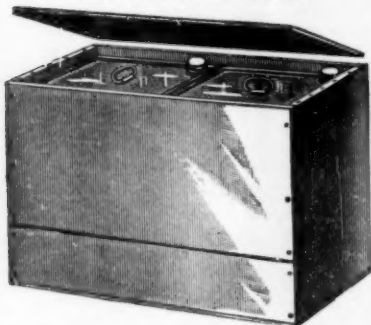
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